App. No. 09/073,596 Reply to Office Action of 13 December 2006 Page 2 of 12

Amendments to Claims:

This listing of claims will replace all prior versions and listings in the application:

Listing of Claims:

- 1-88.(Canceled)
- 89. (Previously Presented) The composition according to claim 101, wherein the antigen is a microorganism.
 - 90. (Canceled)
- 91. (Previously Presented) The composition according to claim 89, wherein the antigen is a polypeptide.
- 92. (Previously Presented) The composition according to claim 89, wherein the antigen is a peptide.
 - 93. (Canceled)
- 94. (Previously Presented) The composition according to claim 101, wherein the antigen is a mycobacterium.
- 95. (Previously Presented) The composition according to claim 94, wherein the mycobacterium is BCG.
 - 96-98. (Canceled)
- 99. (Currently Amended) The pharmaceutical composition according to claim 116, wherein the antigen activated dendritic cells express an amount of the fragmented antigen to provide between about 1 to 100 micrograms of the fragmented antigen in said pharmaceutical composition.
 - 100. (Canceled)
- 101. (Currently Amended) An *in vitro* composition comprising antigen-activated dendritic cells presenting fragmented antigen and derived from an *in vitro* culture of an enriched and expanded population of proliferating dendritic cell precursors by a method comprising:

providing a tissue source comprising dendritic cell precursors;

App. No. 09/073,596 Reply to Office Action of 13 December 2006 Page 3 of 12

optionally treating the tissue source comprising dendritic cell precursors to increase the proportion of dendritic cell precursors;

culturing the tissue source on a substrate in a culture medium comprising GM-CSF to obtain cell aggregates comprising proliferating dendritic cell precursors; and

subculturing the cell aggregates at least one time to enrich the proportion of dendritic cell precursors;

serially subculturing the cell aggregates one or more times to enrich the proportion of dendritic cell precursors; and

continuing to culture the dendritic cell precursors for a period of time to allow them to mature into mature dendritic cells;

wherein the dendritic eell precursors <u>cells</u> are cultured *in vitro* in the presence of an antigen for a time sufficient to allow the antigen to be fragmented and presented.

- 102. (Canceled)
- 103. (Currently Amended) The pharmaceutical composition according to claim 116, wherein the pharmaceutical composition comprises from about 1x10⁶ to 1x10⁷ antigen activated dendritic cells.
- 104. (Previously Presented) The composition according to claim 101, wherein the tissue source is blood.
- 105. (Previously Presented) The composition according to claim 101, wherein the tissue source is bone marrow.
- 106. (Previously Presented) The composition according to claim 101, wherein GM-CSF is present in the culture medium at a concentration of about 1-1000 U/ml.
- 107. (Previously Presented) The composition according to claim 104, wherein the concentration of GM-CSF in the culture medium is about 30-100 U/ml.
- 108. (Previously Presented) The composition according to claim 105, wherein the concentration of GM-CSF in the culture medium is about 400-800 U/ml.

App. No. 09/073,596 Reply to Office Action of 13 December 2006 Page 4 of 12

- 109. (Previously Presented) The composition according to claim 101, wherein the cell aggregates are blood derived and are subcultured from about one to five times.
- 110. (Previously Presented) The composition according to claim 101, wherein the cell aggregates are subcultured one to five times.
- 111. (Previously Presented) The composition according to claim 101, wherein the culture medium is selected from the group consisting of RPMI 1640, DMEM and α -MEM, and wherein the culture medium is supplemented with serum.
- 112. (Previously Presented) The composition according to claim 104, wherein the tissue source is treated to remove red blood cells.
- 113. (Previously Presented) The composition according to claim 105, wherein the tissue source is treated to remove B cells and granulocytes.
 - 114. (Canceled)
- 115. (Previously Presented) The composition according to claim 101, wherein said fragmented antigen is presented by the dendritic cells on MHC class I or MHC class II molecules.
- 116. (Previously Presented) A pharmaceutical composition comprising a therapeutically effective amount of the composition according to claim 101.
- 117. (Previously Presented) The composition according to claim 94, wherein the mycobacterium is a tuberculosis bacteria.
- 118. (Currently amended) The composition according to claim 101, wherein the dendritic cell precursors cells are cultured in the presence of antigen for between 1-48 hours.
- 119. (Currently amended) The composition according to claim 118, wherein the dendritic eell precursors cells are cultured in the presence of antigen for about 20 hours.
- 120. (Currently Amended) An *in vitro* composition comprising antigen-activated dendritic cells, wherein said antigen-activated dendritic cells are derived from an *in vitro* culture of a population of enriched and expanded proliferating precursor cells, wherein said dendritic

App. No. 09/073,596 Reply to Office Action of 13 December 2006 Page 5 of 12

cells are which were contacted in vitro with antigen in the presence of GM-CSF for a sufficient time for antigen fragmentation and presentation to occur.

- 121. (Previously Presented) The composition of claim 101, wherein the cell aggregates are serially subcultured one to five times.
 - 122. 139. (Cancelled)
- 140. (Previously Presented) The composition of claim 101, wherein said culture medium further comprises TNF- α .
- 141. (Previously Presented) The composition of claim 140, wherein said culture medium comprises TNF-α at a concentration of from 5 to 500 U/ml.
- 142. (New) The composition according to claim 101, wherein the dendritic cell precursors are human.
- 143. (New) The composition of dendritic cell precursors according to claim 142, wherein the dendritic cell precursors are obtained from blood.
- 144. (New) The composition of dendritic cell precursors according to claim 142, wherein the dendritic cell precursors are obtained from bone marrow.